

19991107.ba v02\_n722.bam.991107 v02\_n723.bam.991107

>From ???@??? Sun Nov 07 15:18:47 1999  
Message-Id: <199911071848.dA7Imcw12199@sco.theporch.com>  
Date: Sun, 7 Nov 1999 12:46:23 CST  
From: Old Tube Radios <boatanchors@theporch.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: BOATANCHORS digest 2722

## BOATANCHORS Digest 2722

Topics covered in this issue include:

- 1) HP 608C vs. HP 608D  
by Fred Powell <powellf@earthlink.net>
- 2) Re: Solid State Vibrator Status  
by Hue Miller <kargokult@proaxis.com>
- 3) Solid-State Vibrators  
by "Richard Brunner" <rbrunner@gis.net>
- 4) PE-237 & VB-16 Vibrator  
by "Richard Brunner" <rbrunner@gis.net>
- 5) Re: Schematic for ART--13  
by Neal McEwen <nmcewen@metronet.com>
- 6) Sweep Generator or VFO?  
by "Larry Kayser" <kayser@king.igs.net>
- 7) Re: Solid State Vibrator Status  
by Ray Vasek <w2ec@ibm.net>
- 8) Re: Solid State Vibrator  
by wz7vbn@bfm.org (Norrgran, Barry)
- 9) Need DX-100 Audio Advice  
by James Hanlon <knjhanlon@uswest.net>
- 10) Re: Solid State Vibrator Status  
by John jack M Iverson <jackiv@juno.com>
- 11) 312A-1  
by "Grant Youngman" <nq5t@gte.net>
- 12) RE: Solid-State Vibrators  
by "Jim Berry" <basalop@gte.net>
- 13) Technical help needed  
by "Jim Reynolds" <ki6up@earthlink.net>
- 14) Re: REALRADIO #1 on RME69  
by polepeeg@aa4rm.ba-watch.org (Marty's Refl. Drop)
- 15) Loctals, Octals, Miniatures  
by polepeeg@aa4rm.ba-watch.org (Marty's Refl. Drop)
- 16) Re: Loctals, Octals, Miniatures  
by polepeeg@aa4rm.ba-watch.org (Marty's Refl. Drop)
- 17) Buying and Selling Tubes  
by David Stinson <arc5@ix.netcom.com>
- 18) Re: Buying and Selling Tubes

by mblair1@home.net  
19) Re: Buying and Selling Tubes  
by Deane D McIntyre <dmcintyr@ucalgary.ca>

-----  
Message-ID: <382400CF.4BF352DA@earthlink.net>  
Date: Sat, 06 Nov 1999 10:20:01 +0000  
From: Fred Powell <powellf@earthlink.net>  
MIME-Version: 1.0  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: HP 608C vs. HP 608D  
Content-Type: text/plain; charset=us-ascii; x-mac-type="54455854"; x-mac-creator="4D4F5353"  
Content-Transfer-Encoding: 7bit

John,  
You asked what was the difference between the C and D and I just happened to have read the particular HP Journal covering it, Vol 5, No. 12 dated August 1954. They are both MOPA type covering 10 to 420 mc (in slightly different ranges). The D is more "technically refined" delivers 0.5V into 50 ohms, and has a 5 mc crystal calibrator. The C delivers 1.0V into 50 ohms, doesn't have a crystal calibrator, and has a looser spec for residual FM, about three times higher. The block diagram shows that the D has a buffer stage and crystal calibrator and the C does not. I wouldn't mind having either one.

Now what is the difference when we go the 608E, 608F,...,608x?

Cheers  
Fred Powell

-----  
Message-Id: <3.0.5.32.19991106114447.007dd2c0@proaxis.com>  
Date: Sat, 06 Nov 1999 11:44:47 -0800  
To: Old Tube Radios <boatanchors@theporch.com>  
From: Hue Miller <kargokult@proaxis.com>  
Subject: Re: Solid State Vibrator Status  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

If that manufacturer was rude and arrogant, that's just from being ignorant people.  
But i can understand if it's a busineess, them not wanting to mess with unpaying complications. I don't imagine there's much of a vibrator market anywhere, so talking vibrators doesn't pay much rent. And how big is the market for military vibrators? About as big as the market for grid leak pans.

I've seen a couple vibrator replacement plans, one in old PE and later one elsewhere, don't recall. The PE one was most minimal, 2 transistors, audio transformer for feedback, 2 startup resistors. There's no need to wind torroids for this use, unless that's fun for you. I think the later plan used power FETs. The only challenge i see above the simple draw it on a napkin simple design would be to care for robust ratings, since we're powering transmitters, sometimes. Some of those military things must have had to switch big power. Didn't the PE-237 have a bunch of vibrators in it, each feeding its own part of the power transformer, or something like that?

Hue Miller

-----  
Message-Id: <199911062006.PAA23369@mx02.gis.net>  
From: "Richard Brunner" <rbrunner@gis.net>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Solid-State Vibrators  
Date: Sat, 6 Nov 1999 15:04:06 -0500  
MIME-Version: 1.0  
Content-Type: text/plain; charset=ISO-8859-1  
Content-Transfer-Encoding: 7bit

Robert und Gruppe:

For constructing solid-state vibrators, see my article in April 1998 Electric Radio, "GRC-9 Operating Notes," (Fig. 3), "Transistor Vibrator Replacement." Nothing could be simpler - only two transistors and two resistors in a multivibrator circuit! For a synchronous vibrator, you add two diodes in the base. This is slightly more efficient than a mechanical vibrator, and generates no hash. I THINK there are only two standard wiring diagrams; four pin for non-synchronous, and six pin for synchronous vibrators. For all the equipment I have seen, shunt-driven and series-driven vibrators can be used interchangeably, and it would be irrelevant for a solid-state one.

Other circuits show a separate winding to drive the bases, but I see no advantage over using resistors, and it is more complicated. I have used this circuit many times, and it works every time!

Richard Brunner, AA1P, rbrunner@gis.net

-----  
Message-Id: <199911062043.PAA25103@mx02.gis.net>  
From: "Richard Brunner" <rbrunner@gis.net>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: PE-237 & VB-16 Vibrator  
Date: Sat, 6 Nov 1999 15:41:16 -0500  
MIME-Version: 1.0  
Content-Type: text/plain; charset=ISO-8859-1

Content-Transfer-Encoding: 7bit

Yes indeed, the PE-237 (6/14/24 v power supply for the GRC-9) has a huge vibrator with five sets of contacts which feed five separate transformers! The transformer output windings are in series to provide B+, and there is an output to feed a regulating transformer for filament voltage, and one for the hv rectifier heater. (in late models, early ones used high-field emission with no heater power) Last summer I brought one back to life, and it works remarkably well. The VB-16 vibrator has a nasty buzz which would be hard to live with with the lid off, albeit no worse than a dynamotor, merely different.

Richard Brunner, AA1P, rbrunner@gis.net

-----  
Message-ID: <3824BC0D.BA714BEB@metronet.com>  
Date: Sat, 06 Nov 1999 17:38:53 -0600  
From: Neal McEwen <nmcewen@metronet.com>  
MIME-Version: 1.0  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: Schematic for ART--13  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

jim maxwell wrote:

>To: jim maxwell <jimktp90@hotmail.com>

> the complete teletype set up and cw set up for the navy version of the art 13  
> collins the xmtr has lost the MCW it went sudenly in the middle of a qso do  
> you know where i can get a schematic for it?

Can any one help Jim with a schematic for the ART-13?

--

73 de K5RW, Neal McEwen, at "The Telegraph Office", nmcewen@metronet.com  
A WWW Page for Telegraph Key Collectors and Historians  
[http://www.metronet.com/~nmcewen/tel\\_off.html](http://www.metronet.com/~nmcewen/tel_off.html)

-----  
Message-ID: <00ab01bf28b3\$8aa6d6b0\$0a00a8c0@server1.ThreeLakes.ca>  
From: "Larry Kayser" <kayser@king.igs.net>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Sweep Generator or VF0?  
Date: Sat, 6 Nov 1999 19:03:32 -0500  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Greetings All

What is one mans Sweep Generator is another mans VFO, just a little levity

Larry  
VA3LK

-----  
Message-ID: <3824C625.55758803@ibm.net>  
Date: Sat, 06 Nov 1999 19:21:57 -0500  
From: Ray Vasek <w2ec@ibm.net>  
MIME-Version: 1.0  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: Solid State Vibrator Status  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

I'm coming in late on this thread so don't know exactly what started it, but if you are looking for SS/vibrator powersupplies to simulate batteries for military gear, you might want to look at "<http://www.qsl.net/wb4tur/images/dcdc.htm>" maybe this might help.

Good luck & 73, Ray W2EC

-----  
Message-Id: <3.0.6.32.19991106173823.00a0cc10@mail.bfm.org>  
Date: Sat, 06 Nov 1999 17:38:23 -0600  
To: Old Tube Radios <boatanchors@theporch.com>  
From: wz7vbn@bfm.org (Norrgran, Barry)  
Subject: Re: Solid State Vibrator  
Mime-Version: 1.0  
Content-Type: text/plain; charset="iso-8859-1"  
Content-Transfer-Encoding: quoted-printable

A vibrator is a simple affair. It is made to switch the 12volt DC back and forth to the windings of a transformer not unlike a turn signal relay but at a much faster 1-3Khz rate thus applying a 12volt square wave to the primary. So whats in the can is just a set of contacts that wobble back and forth reversing the 12V and a relay coil which operates on the principle of a door buzzer. Usually the 12v is applied to the center tap of the primary and the spdt wiper contact swithes back and forth to ground one of the other outside wires of the primary. There are two types of vibrators. The Non-synchronous just described and the Synchronous. The synchronous has an extra set of contacts that perform rectification on the secondary side. This would be a DPDT with both wipers grounded and a filter cap on the secondary center tap. The relay coil has an additional contact to perform the "buzzer" action. The drawback of the vibrator is that you have a whole lot of sparkin going on and must accomodate some good hash filtering in the

supply. Only thing in the can are contacts and a coil.=20

Hope this helps, any old ARRL handbook from the 40-50s has circuits and more. The invention of transistor multivibrators helped a lot, which led into the switching power supplies of today.=20

-----=20  
From: \ / Barry Norrgran WZ7V \ / WN9ASQ=3D>WA9ASQ=3D>KC0KV=3D>WZ7V \ /=  
=A7=A7=A7=A7=A7=20  
73 || Manson Lake, Wisconsin|| Hammin it up since 1960 || =A7=BA=BF=  
=BA=A7=20  
CUL || In the Indian's Ear || Real Radios Grow in the Dark|| =A7 w =A7=  
=20  
-----/\-----/\-----/\-----=BB  
=20

-----  
Message-ID: <3824D1A8.F45D213@uswest.net>  
Date: Sat, 06 Nov 1999 18:11:04 -0700  
From: James Hanlon <knjhanlon@uswest.net>  
MIME-Version: 1.0  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Need DX-100 Audio Advice  
Content-Type: text/plain; charset=iso-8859-1  
Content-Transfer-Encoding: 8bit

All Yiall,

It is about time for me to wrestle my 100 pound DX-100 down from its place on the top shelf so I can replace the vfo tube and clean a few contacts in hopes that it will cure a bit of drift. The last time I had it down was in 1995, so I can't complain too much. As you can see from the title, I'm wondering if I should have another go at the audio in the DX-100.

My problem with the DX-100 modulation is that it seems to be heavily distorted. When I drive the mike input with a pure, 1000 Hz sine wave, the resulting modulation envelope is considerably rounded and flattened on the positive peaks and perhaps narrowed on the negative peaks. It does not appear to go into hard cutoff on the negative peaks no matter how much audio gain I use.

At this point, the 12AX7 audio amplifier and 12BY7 audio driver stages are stock DX-100. All of the resistors measured within tolerance back in 1995, and the tubes tested OK on my Hickok 6000A. When I acquired the rig many moons ago, the 1625s were idling at 200 ma plate current, so I made a couple of changes to correct that condition. The

1625 screens were running at 400 volts, so I installed a 20K tapped wire wound resistor as a voltage divider for the screens and set them to 300 volts, per the ARRL Handbook rating for class AB2 807is. I also changed the control grid bias feed to the 1625is. I put a 5K pot from the output of the 6AL5 bias rectifier/filter to ground, and I fed the driver transformer center tap to the variable tap on the pot. I use the pot to adjust the modulator for 50 ma resting current.

When I drive the mike input with a sinusoidal signal, audio waveforms look clean on a scope up to the 12BY7 grid. The waveform at the 12BY7 plate and at the 1625 grids is distorted in the manner of the wave envelope pattern. Shorting the resistors in series with the 1625 control grids and bypassing the driver transformer center tap to ground do nothing to change the wave form. I've also changed to a different pair of 1625is and switched the 1625 plate leads to the modulation transformer, all with no change in wave form.

When I attach a D-104 or Astatic JT-30 mike (which sound good on other AM rigs) to the mike connector, I have to run the audio gain nearly wide open to get the modulator to peak at the rated 125 ma plate current. When I do this, the rf envelope speech waveform looks distorted on my scope, and the guys on the air tell me it sounds like I'm using a carbon mike. When I back off a bit on the audio gain, they say it sounds better but still like it is limiting.

Does all of this sound "normal" for a near-stock DX-100? Is it possible that the 12BY7 plate transformer is saturating on audio peaks, helped along by that stage's DC plate current? (Maybe I should check the cathode bias circuit on the 12BY7 to see if it is operating correctly.)

Has anyone tried the DX-100 audio modifications described by Bill Beatty, K7CMS, in the May 1993 issue of ER? How did they work out?

Or should I just adapt a T-17 to the DX-100 and forget about it?

Thanks for the consult!

Jim, W8KGI

-----

To: Old Tube Radios <boatanchors@theporch.com>  
Cc: boatanchors@theporch.com  
Date: Sat, 6 Nov 1999 19:10:56 -0600  
Subject: Re: Solid State Vibrator Status  
Message-ID: <19991106.191059.-477373.1.jackiv@juno.com>  
MIME-Version: 1.0  
Content-Type: text/plain  
Content-Transfer-Encoding: 7bit  
From: John jack M Iverson <jackiv@juno.com>

HI gang, if someone of our chemists/hams want to play, I have one of their "potted" vibrators I will give to the cause. It is oisitive ground and was put in a negative ground car.ZAP!!contact me direct.. old jack

On Sat, 06 Nov 1999 11:44:47 -0800 Hue Miller <kargokult@proaxis.com> writes:

>  
> If that manufacturer was rude and arrogant, that's just from being  
> ignorant people.  
> But i can understand if it's a busineess, them not wanting to mess  
> with  
> unpaying complications. I don't imagine there's much of a vibrator  
> market  
> anywhere, so talking vibrators doesn't pay much rent. And how big is  
> the  
> market for military vibrators? About as big as the market for grid  
> leak  
> pans.  
> I've seen a couple vibrator replacement plans, one in old PE and  
> later  
> one elsewhere, don't recall. The PE one was most minimal, 2  
> transistors,  
> audio transformer for feedback, 2 startup resistors. There's no need  
> to wind torroids for this use, unless that's fun for you. I think  
> the  
> later plan used power FETs. The only challenge i see above the  
> simple  
> draw it on a napkin simple design would be to care for robust  
> ratings,  
> since we're powering transmitters, sometimes. Some of those military  
> things must have had to switch big power. Didn't the PE-237 have a  
> bunch of vibrators in it, each feeding its own part of the power  
> transformer, or something like that?  
> Hue Miller  
>

Jack Iverson      KOEWU      jackiv@juno.com



ARRL, IEEE LM, RCA, AMI, ARCI, QCWA,CCA

-----  
Message-Id: <199911070124.TAA1159699@smtpop2.gte.net>  
From: "Grant Youngman" <nq5t@gte.net>  
To: Old Tube Radios <boatanchors@theporch.com>  
Date: Sat, 6 Nov 1999 19:24:23 -0600  
MIME-Version: 1.0  
Content-type: text/plain; charset=US-ASCII  
Content-transfer-encoding: 7BIT  
Subject: 312A-1

All this talk about lights and endcaps and shades has rekindled my interest in attempting the unobtainable ... :-)

Anyone out there have a 312A-1 gathering dust? It doesn't need to have any of the lamp parts (I have a complete set sitting in a closet), and just needs to be restorable -- meaning it can have a really lousy paint job, as long as it is otherwise in good physical shape without holes, dents, engravings on the front panel, etc. ....

Trades might be possible for other St. James Gray stuff, depending on what you're looking for. Cash always works.

Grant

Grant Youngman / NQ5T  
nq5t@gte.net  
BA pics at <http://home1.gte.net/nq5t>  
Double Oak, TX -- nr Dallas

-----  
From: "Jim Berry" <basalop@gte.net>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: RE: Solid-State Vibrators  
Date: Sat, 6 Nov 1999 19:33:21 -0800  
Message-ID: <000101bf28d0\$d6f12620\$6a000f3f@default>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

The info is out there for creating solid state vibrators. I remember doing it with a couple of Motorola or GE land mobile radios. Gads, that was back in the 70's and I do not any longer have any data. It

was a cheap and easy project. Anyone interested in creating solid state vibrators might also scrounge through any old mobile radio notes.

73 Jim K7SLI

-----  
From: "Jim Reynolds" <ki6up@earthlink.net>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Technical help needed  
Date: Sun, 7 Nov 1999 00:05:34 -0600  
Message-ID: <002601bf28e6\$1a7493e0\$9c49fc9e@ripcord>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

My worse night mere. I was talking with the gang on 3885, listening on the R-390A and switched the AGC from med to fast. Killed the audio. I didnt smell anything burn and I didnt see any kilocycle smoke rise from the cabinet.

The Carrier level still read incoming signals. The IF out in the rear to the scope is dead, no head phone..... I could cry.

Any suggestions

KI6UP

-----  
Date: Sun, 7 Nov 1999 06:09:51 -0500  
From: polepeeg@aaa4rm.ba-watch.org (Marty's Refl. Drop)  
Message-Id: <199911071109.GAA07423@aaa4rm.ba-watch.org.>  
To: Old Tube Radios <boatanchors@theporch.com>  
Cc: boatanchors@theporch.com  
Subject: Re: REALRADIO #1 on RME69

1st tried getting WBCQ on a Drake SSR-1 that'd been off for 5 mo.s but it was dead as Kelsey's nuts.

So scrambled to the RME69 (paired w. RME69 - I call them the freudian twins) to tune in. Set RME to band 4, used band spread to line up main tuning on 10mc wwv, then went right to WA1HLR talking re DRMO removal orders on R390 meters.

Then Robt. Naylor Ham songs

'n stuff

WBCQ Plannit Radio puts a wallopig sig. into Big-A (Atlantum). Ya don't

need much to hear 'em

Good gnuz. SSR-1 started working after program over. Gess '71 electrolytics now a bit dry & the reformation took that interval to get the volts up enuf to lock the Wadley loop. Have same electrolytic bug with a KLH24.

But me & wife & 17-yr old avaiator son like listening to The RME proolly much better.

Mike you sure make a fb MC! Pse excuse all the techno-rx-preamble to get down to that... and idea of using a sw broadcaster nr. 40m for a ham show just great! Next step might be a real-audio dial-in talk show where all outgoing over air, all incoming via net.

Gimme credit if u doit.

M

-----  
Date: Sun, 7 Nov 1999 06:44:59 -0500  
From: polepeeg@aa4rm.ba-watch.org (Marty's Refl. Drop)  
Message-Id: <199911071144.GAA07452@aa4rm.ba-watch.org.>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Loctals, Octals, Miniatures

Sounds like a 60s pop-song title: "Icesicles, Popsicles..."

But it's a Capehart plastic ac-dc table 5-tube radio I got at the Alford/Atlanta hamfest yesterday.

A Capehart ??? with 2 loctal sockets, 1 octal, & 2 7-pin mini.s. All IDs missing. 5 tubes but hardly the "All American 5"

One IFT... really built to a price. Not in in Riders 17-23. But simple enuf & as per A Scharwtznegger & D. McArthur - "I'll be back."

If only it cud talk about it's designer & why Capehart had to design in '47 or '48 for "cheapest of cheapies."

M

PeeEss SARS-ites. This came fm fella member Bob Peterson

-----  
Date: Sun, 7 Nov 1999 09:23:38 -0500  
From: polepeeg@aa4rm.ba-watch.org (Marty's Refl. Drop)  
Message-Id: <199911071423.JAA07642@aa4rm.ba-watch.org.>

To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: Loctals, Octals, Miniatures

Got the mystory by the @\$\$!

It's a Capehart T-522 fm '53 via Bunis. Corroborates with the loop ant. remains saying part no. 52-10. In Sams 209 which I don't have - but tubes probably 35w4, 12at/v6, 50a5, 12sk7, 14b8.

Had surplus electrolytic & 'mica-pkg' ww2 caps. Kind built fm anything.

Was about last Capehart so cheapness due to them near company death

M

(kinda cute tho)

((& sars meeting 2moro nite))

-----  
Message-ID: <3825AD01.1AA60237@ix.netcom.com>  
Date: Sun, 07 Nov 1999 10:46:58 -0600  
From: David Stinson <arc5@ix.netcom.com>  
MIME-Version: 1.0  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Buying and Selling Tubes  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Several people over the last few months have asked me about judging the value of tubes they were thinking of buying or selling. I've been buying and selling them for the last few years, so I've put together the pointers I use and copied them to the list in hopes it will be helpful. Others may have differing opinions. Dave S.

-----  
You have to be very careful buying and selling tubes. A few are worth a great deal but even more are nearly worthless. Now, when I say "worthless-" you can always find a hobbyist or two who will take them off your hands. I mean "worthless" as in you can't get enough money to justify the time, effort and shelf space expended on them.

In both buying and selling, you need a realistic guide to resale value.

Here are some basic value guidelines  
that will cover 95% of the tubes you'll find-

Tubes not worth your money or time:

"Series filament" 7- and 9-pin miniature tubes used in televisions-  
typical numbers are things like 5AQ5, 4GH8, 3AK5- are utterly  
worthless, even if NOS. Don't waste your time or shelf space  
(exception- TV power sweep tubes are usually worth saving  
regardless of their filament voltage.

24LQ6, for example, is valuable).

TV damper diodes like 6AD4 or high voltage rectifiers  
like 1B3 and 1K3, even NOS, have no value. Toss them.  
Compactrons other than those used in Heathkit and other  
such ham gear are also worthless.

Tubes generally worth saving (though not always very valuable):

Any six or twelve volt filament tube other than those defined above.

Any two-digit tube or three-digit tube (24A, 301A).

Any tubes produced before 1939.

Any triode or dual triode (2A3, 6SN7, 6DJ8, 12AX7 etc.).

Any audio power tube (6L6, 6V6, 45 etc.).

Any transmitting tube.

Any voltage rectifier other than those defined above.

Any "odd" or "collectable" tubes (acorns, pencil, microwave).

X-ray or Coolidge tubes.

Nuvistors.

Figuring dollar value of your tubes-

Value can vary with buyer, seller and, apparently, the wind.

Many are worth less than a dollar- some are worth hundreds.

There are a few sign posts to guide you along.

The most important factor in fixing dollar value for your tubes  
is how quickly you want to move them.

Second is their condition.

If you don't mind letting them sit on your shelf  
(which costs you time-value against your investment and will  
eventually erode away that value), then price them  
close to the price in the AES catalog (I hope you  
really like tubes because you're going to have them  
for a long, long time).

If you want to get your money out of them more quickly,  
price them between 40% and 60% of AES new tube prices.

This is assuming, of course, that we're talking about  
tubes that are 'new in box' (NIB). If your tubes are white boxed  
or "loose-" even if you swear on your mother's name that  
they're new- they're USED. Sorry.

Used tubes that are uncommon and test "good" will usually have a maximum value of 25% to 30% of NIB. Used common audio tubes like dual triodes 12AX7 and 6SN7 bring about \$2 each, so you get even less here. Certain brand names or physical traits can add value to a "used" tube, such as being an Amperex "Bugle Boy" or an RCA "Black Plate" tube. Research current prices for new tubes of these types. Value these used tubes at about 20%-25% of NIB prices. Rare tubes are exceptions to the NIB rule, of course, but will still bring far less than NIB.

There is a way to get a reasonable value for your tubes within in a reasonable time. The E\*b\*a\*y haters are going to get all squirmy, but if they want to be stuck with tubes for which they can't get a decent price, it's nothing to me. If you want to sell tubes and get a decent return, follow these steps:

Catalog the tubes you have and their condition. Take a decent photograph of the lot. Get the AES catalog and set a value on the lower side of the guidelines above- the lower value you set, the more likely you are to sell them. List the tubes on Ebay. Be absolutely and brutally honest in your description if you ever want to sell anything else- the market is unforgiving of those that intentionally mislead. You must post a photograph of the lot if you want the best price.

Set the reserve price for your lot at the value you have calculated and open the bidding at \$1. The reserve protects your investment against the unforeseen and market fluctuations. The \$1 opening overcomes the human reluctance to be the first person to make a large bid. Post on the three news groups who's charters permit sale posts: rec.radio.swap, rec.radio.amateur.boatanchors, rec.audio.tubes. Be absolutely certain to put

FA: (whatever tubes)

in the subject line of your post. This has become the standard courtesy to those who wish to filter out auction posts. You can expect one or two horses-asses to make smart remarks about your perfectly legitimate post. This comes with the territory. If they get nasty, report them to their ISP. I've gotten three users who were old enough to know better suspended for this and they don't mess with me anymore.

I hope this helps-  
Best of luck on your ventures!

73 DE Dave Stinson AB5S

-----  
Message-Id: <199911071748.JAA22632@cx689895-a.msnv1.occa.home.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: Buying and Selling Tubes  
Date: Sun, 07 Nov 1999 09:48:09 -0800  
From: mblair1@home.net

David Stinson <arc5@ix.netcom.com> wrote:

> Tubes not worth your money or time:  
> "Series filament" 7- and 9-pin miniature tubes used in televisions-  
> typical numbers are things like 5AQ5, 4GH8, 3AK5- are utterly  
> worthless, even if NOS. Don't waste your time or shelf space  
> (exception- TV power sweep tubes are usually worth saving  
> regardless of their filament voltage.  
> 24LQ6, for example, is valuable).  
> TV damper diodes like 6AD4 or high voltage rectifiers  
> like 1B3 and 1K3, even NOS, have no value. Toss them.  
> Compactrons other than those used in Heathkit and other  
> such ham gear are also worthless.

Those series-filament miniature tubes are used in most of the military tactical vehicular radios from the 1950's. A cursory glance through one of my manuals turns up the following tube line-up:

1A3 1AE4 1L4 1R5 1S5 1U4 2E24 3A4 3A5 3B4 3Q4 6AK5

Most of the radios in my collection have similar tube line-ups. There's even a Compactron in one of my military radios.

How can you tell somebody to throw away good tubes? IMHO, that is completely contrary to the spirit of our hobby. Nobody is making any more of those tubes, and if people just throw away tubes that don't fit in the radios in their own garage, that will only make the day when we can no longer keep our historically interesting equipment working get here more quickly.

I could just as easily say that none of the following tubes have any value, because I've never encountered a radio that uses them:

12A6 12J5GT 12K8 12SK7 12SR7 1625 1626 1629

Or maybe they are valuable to somebody, and my particular interests just haven't led me to acquire any radio gear that uses them?

--

Mark J. Blair, KE6MYK <mblair1@home.net>  
PGP 2.6.2 public key available from <http://pgp.ai.mit.edu/>  
Web page: <http://www.qsl.net/ke6myk/>  
DO NOT SEND ANY UNSOLICITED COMMERCIAL EMAIL TO THIS SITE

-----  
Message-ID: <3825C8C5.F66EDCDA@ucalgary.ca>  
Date: Sun, 07 Nov 1999 11:48:34 -0700  
From: Deane D McIntyre <dmcintyr@ucalgary.ca>  
MIME-Version: 1.0  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: Buying and Selling Tubes  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

David Stinson wrote:

> Tubes not worth your money or time:  
> "Series filament" 7- and 9-pin miniature tubes used in televisions-  
> typical numbers are things like 5AQ5, 4GH8, 3AK5- are utterly  
> worthless, even if NOS. Don't waste your time or shelf space  
> (exception- TV power sweep tubes are usually worth saving  
> regardless of their filament voltage.  
> 24LQ6, for example, is valuable).  
> TV damper diodes like 6AD4 or high voltage rectifiers  
> like 1B3 and 1K3, even NOS, have no value. Toss them.  
> Compactrons other than those used in Heathkit and other  
> such ham gear are also worthless.  
>  
> Tubes generally worth saving (though not always very valuable):  
> Any six or twelve volt filament tube other than those defined above.  
> Any two-digit tube or three-digit tube (24A, 301A).  
> Any tubes produced before 1939.  
> Any triode or dual triode (2A3, 6SN7, 6DJ8, 12AX7 etc.).  
> Any audio power tube (6L6, 6V6, 45 etc.).  
> Any transmitting tube.  
> Any voltage rectifier other than those defined above.  
> Any "odd" or "collectable" tubes (acorns, pencil, microwave).  
> X-ray or Cooledge tubes.  
> Nuvistors.  
>



This is a good intro for those who have a stash of tubes (perhaps acquired from the estate of Uncle John who was in the radio/TV repair business for 30 years) and have little idea what they are worth. Some are inclined to believe that all tubes must be worth a lot, which of course is nonsense. As David indicates, the trick is knowing the jewels from the very low value (I won't use the term worthless in this connection) tubes.

In addition to the tubes listed above, the following should be looked for:

- Any of the 1.4 or 2.0 volt 7-pin miniature, octal or loctal battery tubes. With the exception of those with centre tapped filaments (3Q4, 3Q5, 3V4, 3S4, 3A4, 3A5 etc) they all start with the number "1".

The jewel in this bunch is the 1L6 pentagrid converter (now over \$30 at most tube vendors). They are easily distinguished from TV HV rectifiers by their internal construction and by the fact the the last digit on a HV rectifier is a "2" or "3". Note that some vintage scopes use these HV rectifiers as well.

- Any eye tube (6E5, 6G5, 6U5, 6T5, 6X6 etc) with a reasonably bright eye, used or new, should be carefully set aside. Some (i.e. the rare 6T5) are worth a lot.

- The 50A1 ballast tube used in Zenith 600 series Transoceanics

- Remember, 6.3 volt loctals start with a "7" i.e. 7C5 and 12.6 volt loctals with a "14" i.e. 14B8; in fact any loctal tube should find a buyer

- With the number of "AA5" sets around, the tubes they they use, despite not being very valuable, will find buyers. They are for the most part covered in David list, but look out for 50L6, 50C5, 35Z5, 35W4 as well as the 12.6v (and 18.9v i.e 19T8) tubes used in these sets

- remember that some compactrons such as the 6T9 and 6AF11 are useful to those who are in to homebrewing

Packrats like myself cannot bring themselves to throw out even the "worthless" series TV types however.....anyone need any 8BN6's ?

73, Deane D McIntyre VE6BP0  
dmcintyr@ucalgary.ca

-----

End of BOATANCHORS Digest 2722

\*\*\*\*\*

>From ???@??? Sun Nov 07 23:31:19 1999  
Message-Id: <199911072312.dA7NCew23311@sco.theporch.com>  
Date: Sun, 7 Nov 1999 17:12:18 CST  
From: Old Tube Radios <boatanchors@theporch.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: BOATANCHORS digest 2723

BOATANCHORS Digest 2723

Topics covered in this issue include:

- 1) Re: Buying and Selling Tubes  
by Kim Herron <kherron@voyager.net>
- 2) FS: Pristine Drake C line  
by JONWEINER@aol.com
- 3) Hickok setting for 572B?  
by "Ken Brookner" <kenb@brookner.com>
- 4) Re: Buying and Selling Tubes  
by Arden Allen <gumbear@pacbell.net>
- 5) Re: Buying and Selling Tubes  
by Bob Roehrig <broehrig@admin.aurora.edu>
- 6) Sealed meter repair - can you do it yourself?  
by "Benjamin D. Hall" <kd5byb@WT.NET>
- 7) vib replacement ?  
by BEN NOCK <G4BXD@compuserve.com>
- 8) 1952 Audels books FS  
by wallace@world.std.com (Andy Wallace)
- 9) Re: Buying and Selling Tubes  
by William Donzelli <aw288@osfn.org>
- 10) Re: Buying and Selling Tubes  
by William Donzelli <aw288@osfn.org>
- 11) Re: Buying and Selling Tubes  
by W0E0M@aol.com
- 12) Re: Buying and Selling Tubes  
by mblair1@home.net
- 13) Re: HP 608C vs. HP 608D  
by Morris Odell <morriso@vifp.monash.edu.au>
- 14) Re: Buying and Selling Tubes  
by David Stinson <arc5@ix.netcom.com>
- 15) Best ham T-shirt  
by polepeeg@aa4rm.ba-watch.org (Marty's Refl. Drop)
- 16) Re: Buying and Selling Tubes  
by David Stinson <arc5@ix.netcom.com>
- 17) Re: Buying and Selling Tubes

by "Mike Feher" <n4fs@monmouth.com>  
18) Re: Need DX-100 Audio Advice  
by jim lockwood <jmlckwd@mindspring.com>

-----  
Message-Id: <3.0.6.32.19991107150202.007c82f0@pop.voyager.net>  
Date: Sun, 07 Nov 1999 15:02:02 -0500  
To: Old Tube Radios <boatanchors@theporch.com>  
From: Kim Herron <kherron@voyager.net>  
Subject: Re: Buying and Selling Tubes  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

Hi Guys,

> 1A3 1AE4 1L4 1R5 1S5 1U4 2E24 3A4 3A5 3B4 3Q4 6AK5

Just to be fair to Dave, none of these tubes, mentioned above, are "series filament tubes". When Dave refers to series string filament tubes, he means something like a 3GK5, or a 3AL5 or a 4BQ7. Get the picture? You won't find any tubes like that in a Mil radio. As for compactrons, I'd like to have a nickel for every one that I've thrown away. I've yet to find a use for a 23Z9 and I've probably thrown away 3 gross of them ( a gross is 144, for the uninformed).

I've bought and sold tubes for more years than I care to recount (gives away my age). Dave Stinson is RIGHT ON THE MONEY with what he said about the buy and sell of tubes. I have over 100,000 tubes on the shelf and ain't one of 'em junk. But then I still own them, too. You figure it out.,

BTW, to clear up a misconception, the average loctal tube is not considered an "odd voltage tube". They are 6 and 12 voltage heater voltages, with the exception of the ones designed to be used in a battery or portable set

A 1LA6 is an example. They are valuable and sometimes hard to find. The antique radio, and auto radio people have need of them all the time. I sell everyone that I get.

Kim Herron  
W8ZV

-----  
From: JONWEINER@aol.com  
Message-ID: <0.a746de01.2557239b@aol.com>  
Date: Sun, 7 Nov 1999 13:48:59 EST  
Subject: FS: Pristine Drake C line  
To: Old Tube Radios <boatanchors@theporch.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

Content-Transfer-Encoding: 7bit

I am selling an absolutely pristine Drake C line, consisting of the T4X-C transmitter, MS-4 Speaker/power supply enclosure, AC-4 power supply, W4 wattmeter, and R4-C receiver. The receiver has all three (.25, .5, and 1.5kHz) CW filters installed, as well as the 8kHz AM filter. Included are the original manuals. Price \$1000. for all, pick up at Greenville, SC, or plus shipping. USA only.

Jon, K1VVC

-----  
Message-ID: <00b301bf2956\$b1561c00\$1014a8c0@winqat>  
From: "Ken Brookner" <kenb@brookner.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Hickok setting for 572B?  
Date: Sun, 7 Nov 1999 11:31:30 -0800  
MIME-Version: 1.0  
Content-Type: text/plain;  
        charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

i've got some 572B tubes that i'd like to test in my hickok 546. does anyone have a setting for these tubes?

TIA & 73,  
kenb n5lpi/7

-----  
kenb@brookner.com  
kenb@qatrix.panther.net  
...!rwsys!rowdy!qatrix!kenb

-----  
Date: Sun, 07 Nov 1999 12:08:31 -0800  
From: Arden Allen <gumbear@pacbell.net>  
Subject: Re: Buying and Selling Tubes  
To: Old Tube Radios <boatanchors@theporch.com>  
Message-id: <0FKU003GFGBYDY@mta3.snfc21.pbi.net>  
MIME-version: 1.0  
Content-type: text/plain; charset=ISO-8859-1  
Content-transfer-encoding: 7bit

David Stinson sez:

And Arden Allen rebuts with a few minor exceptions:

> Tubes not worth your money or time:  
> "Series filament" 7- and 9-pin miniature tubes used in televisions-

- > typical numbers are things like 5AQ5, 4GH8, 3AK5- are utterly
- > worthless, even if NOS. Don't waste your time or shelf space
- > (exception- TV power sweep tubes are usually worth saving
- > regardless of their filament voltage.
- > 24LQ6, for example, is valuable).
- > TV damper diodes like 6AD4 or high voltage rectifiers
- > like 1B3 and 1K3, even NOS, have no value. Toss them.
- > Compactrons other than those used in Heathkit and other
- > such ham gear are also worthless.

There are a few television set restorers, some of them to be found as members of CHRS and SCARS, a couple of antique radio clubs I'm familiar with. I would catalog the TV tubes, and especially important, the older types like 6J6 and 6BQ6. I would communicate that list to the clubs as well as post them to newsgroups and offer them as "pick and choose, any reasonable offer accepted, the more you buy the better the bargain, tubes are as described but the occurrence of a dud or two cannot be ruled out". Some limited budget collectors will take some off of your hands and be grateful. THEN after a reasonable amount of time toss the remainders.

In a couple of cases TV dampers diodes are used in ham transmitters as power supply rectifiers. I don't remember make and models.

- > Tubes generally worth saving (though not always very valuable):
- > Any six or twelve volt filament tube other than those defined above.
- > Any two-digit tube or three-digit tube (24A, 301A).
- > Any tubes produced before 1939.
- > Any triode or dual triode (2A3, 6SN7, 6DJ8, 12AX7 etc.).
- > Any audio power tube (6L6, 6V6, 45 etc.).
- > Any transmitting tube.
- > Any voltage rectifier other than those defined above.
- > Any "odd" or "collectable" tubes (acorns, pencil, microwave).
- > X-ray or Cooledge tubes.
- > Nuvistors.

Also, many of the four digit industrial specials and equivalents used in test equipment. Tek had a number of specially processed equivalents made for them.

- > Figuring dollar value of your tubes-
- > Value can vary with buyer, seller and, apparently, the wind.
- > Many are worth less than a dollar- some are worth hundreds.
- > There are a few sign posts to guide you along.
- > The most important factor in fixing dollar value for your tubes
- > is how quickly you want to move them.
- > Second is their condition.

Paraphrasing some sage, "money not moving is worthless". You can't take

your tubes with you either.

- > If you don't mind letting them sit on your shelf
- > (which costs you time-value against your investment and will
- > eventually erode away that value)...

Sounds like flotsam from some biz course.

- > .....This is assuming, of course, that we're talking about
- > tubes that are 'new in box' (NIB). If your tubes are white boxed
- > or "loose-" even if you swear on your mother's name that
- > they're new- they're USED. Sorry.

I don't buy that. Why cuz? I've run into dealers a number of times that have purchased manufacturer's tube stocks that are shipped in "egg crates". They were re-boxed at some expense but are NIB just the same.

- > .....Used tubes that are uncommon and test "good"
- > will usually have a maximum value of 25% to 30% of NIB.
- > Used common audio tubes like dual triodes 12AX7 and 6SN7
- > bring about \$2 each, so you get even less here.
- > Certain brand names or physical traits can add value to
- > a "used" tube, such as being an Amperex "Bugle Boy" or
- > an RCA "Black Plate" tube. Research current prices for
- > new tubes of these types. Value these used tubes at
- > about 20%-25% of NIB prices.

Check out some of the audiophoole sites that hawk tubes for pricing.

- > Rare tubes are exceptions to the NIB rule, of course,
- > but will still bring far less than NIB.....

An audiophoole friend of mine would dispute that. You mention "rare" to him and his eyes turn green. He pays big bucks for some of the "rare"s. It all depends on what you mean by "rare".

- > .....You must post a photograph of the lot if you want the best price.
- .....

I have yet to post a pic on zorchBay and I've done OK. I've seen pics of tubes that are meaningless. The best thing for a listing on ePhratz is a concise description that appeals to the interests of your potential bidder/buyer. No cutesie stuff, you won't be taken seriously. Know your victim.

- > Set the reserve price for your lot at the value
- > you have calculated and open the bidding at \$1.
- > The reserve protects your investment against the unforeseen

> and market fluctuations. The \$1 opening overcomes the human  
> reluctance to be the first person to make a large bid.....

On the other hand, a reserve price listing counteracts that. Better to set a reasonable low end start price, it will allay suspicion you are trying to be clever.

My comments may sound like nit-picking but there are no really hard-and-fast rules to go by IMHO, just a lot of good sense and some occasional good luck. I hate cook books.

Arden Allen KB6NAX Vallejo, CA gumbear@pacbell.net

-----  
Date: Sun, 7 Nov 1999 14:13:55 -0600 (CST)  
From: Bob Roehrig <broehrig@admin.aurora.edu>  
To: Old Tube Radios <boatanchors@theporch.com>  
cc: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: Buying and Selling Tubes  
Message-ID: <Pine.OSF.3.96.991107141003.15049B-1000000@admin.aurora.edu>  
MIME-Version: 1.0  
Content-Type: TEXT/PLAIN; charset=US-ASCII

On Sun, 7 Nov 1999, Deane D McIntyre wrote:

> In addition to the tubes listed above, the following should be looked for:  
> -Any of the 1.4 or 2.0 volt 7-pin miniature, octal or loctal battery tubes.  
> With the exception of those with centre tapped filaments (3Q4, 3Q5,  
> 3V4, 3S4, 3A4, 3A5 etc) they all start with the number "1".

Not totally true. The 3V4 and 3S4 were used as output tubes for the battery versions of the AA5 sets.

Also I just built a regen set using a 3Q5 (I have 3 of them) and it makes a great tube for that (1st stage = regen, 2nd stage = audio amp).

"Nostalgia is a thing of the past"  
E-mail: broehrig@admin.aurora.edu or k9eui@arrl.net 73 de Bob, K9EUI  
CIS: Data / Telecom Aurora University, Aurora, IL  
630-844-4898 Fax 630-844-4222

-----  
Message-Id: <3.0.32.19991107143511.007f37d0@mail.wt.net>  
Date: Sun, 07 Nov 1999 14:35:13 -0600  
To: Old Tube Radios <boatanchors@theporch.com>  
From: "Benjamin D. Hall" <kd5byb@WT.NET>  
Subject: Sealed meter repair - can you do it yourself?

```
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
```

Greetings all...

I've recently come across a peice of gear that has a sealed, Cycles per Second meter in it. (it is a late BA-era generator) The movement is sticky, and the zero point isn't settable becuase of it. Instead of buying a new meter, I'd like to fix this one.

So, I take the meter out and the case says "SEALED - DO NOT OPEN."

Does this mean I cannot open it without destroying it? Does it mean I can open it, fix it, close it, but it won't be sealed anymore? Advice? I've got a source for a new meter, but it isn't cheap so I'd like to fix this one...

Thanks and 73,  
Ben

— — —

Benjamin D. Hall, KD5BYB, Engine and radio collector / operator.  
Located in Houston, Texas, USA.

e-mail: [kd5byb@WT.net](mailto:kd5byb@WT.net), web: <http://web.wt.net/~kd5byb/>

"An ye harm none, do what thou wilt."

-----  
Date: Sun, 7 Nov 1999 15:36:13 -0500  
From: BEN NOCK <G4BXD@compuserve.com>  
Subject: vib replacement ?`  
To: Old Tube Radios <boatanchors@theporch.com>  
Message-ID: <199911071536\_MC2-8C1A-CEE4@compuserve.com>  
MIME-Version: 1.0  
Content-Transfer-Encoding: quoted-printable  
Content-Type: text/plain;  
charset=ISO-8859-1  
Content-Disposition: inline

```
>>Dan, had told him to tell me that they weren't
>>interested in the military vibrator replacement
>>market. =
```

[illegible]

I dont know if the sender of the above was looking for a complete vib unit or just to replace the plug in mechanical vib's used in mil sets=



If its just a replacement for the plug in then 2 transistors and 4 resistors =

do just the job. I use such all the time for 19 sets and the like, and it= woks fine,

I use 2N3055 types but any similar power type will do, the collectors go = to the two poles of the old vib, the emitters are joined together and the= common

pin, then the bases are cross coupled to the collectors, 220 ohm c1 to b2= and c2 to b1,  
and 15 ohm b to e. (all 5watt)

cheers, Ben G4BXD. =

-----  
From: wallace@world.std.com (Andy Wallace)  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: 1952 Audels books FS  
Date: Sun, 07 Nov 1999 20:48:28 GMT  
Message-ID: <3826e4eb.86969929@world.std.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Wiring Diagrams for Light and Power  
Questions and Answers for Electricians Examinations for All Grades

Super condition, seem to be 1951/2 printing.

How about \$5 shipped? In the case of multiple responses, I'll draw from a hat next weekend.

--Andy  
wallace@world.std.com

-----  
Date: Sun, 7 Nov 1999 16:03:51 -0500 (EST)  
From: William Donzelli <aw288@osfn.org>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: Buying and Selling Tubes  
Message-ID: <Pine.SUN.3.91-FP.991107155216.28812A-100000@osfn.org>  
MIME-Version: 1.0

Content-Type: TEXT/PLAIN; charset=US-ASCII

> he means something like a 3GK5, or a 3AL5 or a 4BQ7. Get the picture? You  
> won't find any tubes like that in a Mil radio. As for compactrons, I'd  
> like to have a nickel for every one that I've thrown away.  
> I've yet to find a use for a 23Z9 and I've probably thrown away 3 gross of  
> them ( a gross is 144, for the uninformed).

The solution is to take all of the junk tubes to a hamfest and put a FREE  
TUBES sign on them. They will then end up as someone else's "problem".

In 30 or 40 years, I think that many tubes we view as common will have gone  
the way of the 1L6. Not very available - and worth big bucks. Some of  
these junk tubes with dumb filament voltages might just be able to help  
(need a 12AX7 but do not have \$800 in 2029? Use a 7AX7 with a tiny  
DC/DC convertor to step down the filament voltage!)

Also, keep in mind that quite a few compactrons are standard familiar  
tubes in those funny bulbs, maybe in combination with other familiar types.

Me? I never throw away tubes. Thats why I have a box full of 1B3s. Free  
to a good home.

William Donzelli  
aw288@osfn.org

-----  
Date: Sun, 7 Nov 1999 16:12:32 -0500 (EST)  
From: William Donzelli <aw288@osfn.org>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: Buying and Selling Tubes  
Message-ID: <Pine.SUN.3.91-FP.991107160822.28812B-1000000@osfn.org>  
MIME-Version: 1.0  
Content-Type: TEXT/PLAIN; charset=US-ASCII

> Me? I never throw away tubes. Thats why I have a box full of 1B3s. Free  
> to a good home.

In addition, early transistors and ICs should also be saved. Those of us  
with very old computers will need these parts. No, not 7400 TTL and such,  
but the pre-1970 logic families, like HNL, MECL 1+2+3, SLT, MST, RTL, DTL,  
MTTL 1, etc.

Once again, don't pitch 'em - give them away if you have to.

William Donzelli  
aw288@osfn.org

-----  
From: W0E0M@aol.com  
Message-ID: <0.cd4da6f9.255749eb@aol.com>  
Date: Sun, 7 Nov 1999 16:32:27 EST  
Subject: Re: Buying and Selling Tubes  
To: Old Tube Radios <boatanchors@theporch.com>  
CC: boatanchors@theporch.com  
MIME-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"  
Content-Transfer-Encoding: 7bit

Dave - as a tube collector for over 25 years , which means i am a buyer and seller also, because you soon acquire duplicates, I want to commend you for your advice. I have been preaching some of this, which often falls on deaf ears, for years.

I have bought and sold about 10 deForest audions, and last year bought a 1908 deForest triode for almost \$3000. caused some people to wonder about my judgement, but i sold it a month later for almost double, and had two other people waiting, just says that you need to know your market. I have hundreds of 'ordinary' tubes left, but have tired of taking them to swap meets, having the boxes pried open, and hearing' how about 25 cents?'

I have resisted the electronic auctions so far, but that where the game is now.

73, Will Jensby Santa Clara, CA

-----  
Message-Id: <199911072144.NAA30131@cx689895-a.msnv1.occa.home.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: Buying and Selling Tubes  
Date: Sun, 07 Nov 1999 13:44:33 -0800  
From: mblair1@home.net

W0E0M@aol.com wrote:

> Dave - as a tube collector for over 25 years , which means i am a buyer and  
> seller also, because you soon acquire duplicates, I want to commend you for  
> your advice. I have been preaching some of this, which often falls on deaf  
> ears, for years.  
>  
> I have bought and sold about 10 deForest audions, and last year  
> bought a 1908 deForest triode for almost \$3000. caused some people  
> to wonder about my judgement, but i sold it a month later for almost  
> double

It sounds to me like some people view tubes as collectable and/or

profitable items all by themselves, and feel that tubes that won't fetch them a lot of money are worthless. Me? I just want to keep my radios working, and any tube that I need to fix a radio has value. By itself, a tube is just a glass bulb with metal pins. Once I put it in a radio, I can actually \*do\* something with it.

--

Mark J. Blair, KE6MYK <mblair1@home.net>  
PGP 2.6.2 public key available from <http://pgp.ai.mit.edu/>  
Web page: <http://www.qsl.net/ke6myk/>  
DO NOT SEND ANY UNSOLICITED COMMERCIAL EMAIL TO THIS SITE

-----  
Message-ID: <3825F46C.BCB435B1@vifp.monash.edu.au>  
Date: Mon, 08 Nov 1999 08:51:40 +1100  
From: Morris Odell <morriso@vifp.monash.edu.au>  
MIME-Version: 1.0  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: HP 608C vs. HP 608D  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Fred Powell wrote:

> Now what is the difference when we go the 608E, 608F,...,608x?

The series ended with the F. The E & F are virtually identical except for the installation of varactor diodes in the F to allow phase locking or FMing. There's also a minor difference in frequency coverage. The HP8708A is the matching (solid state) phase locking unit for the 608F or the 606B which allows crystal stability to maintained throughout the range and eliminates warm up drift.

They are both MOPA with a buffer. The MO and PA are lighthouse tubes and the buffer is a UHF triode in a 7 pin bulb with a funny european type number. There is a 5 MHz crystal calibrator with a 1 MHz divider. There are quite a few transistors in the levelling and AM section but most of the "real" functions are hollow state. The light bulb stabilized modulating osc and 6080s in the power supply are still there :-). The output goes up to 500 mV. Mechanically they are very beautiful.

73 de Morris VK3DOC

-----  
Message-ID: <3825F664.FB7136E0@ix.netcom.com>  
Date: Sun, 07 Nov 1999 16:00:04 -0600

From: David Stinson <arc5@ix.netcom.com>  
MIME-Version: 1.0  
To: Old Tube Radios <boatanchors@theporch.com>  
CC: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: Buying and Selling Tubes  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

> And Arden Allen rebuts with a few minor exceptions:

> > .....This is assuming, of course, that we're talking about  
> > tubes that are 'new in box' (NIB). If your tubes are white boxed  
> > or "loose-" even if you swear on your mother's name that  
> > they're new- they're USED. Sorry.

>

> I don't buy that. Why cuz? I've run into dealers a number of times that  
> have purchased manufacturer's tube stocks that are shipped in "egg crates".  
> They were re-boxed at some expense but are NIB just the same.  
Perhaps so, but I've been dealing with the market for quite a  
while. It takes some convincing to get buyers to accept  
white-boxed tubes as NOS unless they come from a major dealer  
like AES. I wouldn't accept white-boxed tubes as NOS from  
an individual, and neither should you.

> I have yet to post a pic on zorchBay and I've done OK.  
Glad it works for you. I've been selling there for three years  
and wouldn't even think of posting anything without a picture.  
I've seen case after case of identical items selling for  
very different prices, with the high price going to the  
listing with a photo.

> > Set the reserve price for your lot at the value  
> > you have calculated and open the bidding at \$1.  
>...The \$1 opening overcomes the human  
> > reluctance to be the first person to make a large bid.....

>

> On the other hand, a reserve price listing counteracts that.  
>Better to set a reasonable low end start price,  
>it will allay suspicion you are trying to be clever.  
Sorry, but that approach just doesn't work well.  
The whole auction community just went over this matter extensively.  
People (for some reason which God only knows)  
who would be willing to pay \$100 for an item will not open the  
bid at \$50. 90% of the time it will close without bids first.  
Auctions depend on the "dabblers" who bid \$1 and \$5 to  
get things rolling, after which the serious buyers will bid.  
Your experience may be different but if it is,  
you're in a small minority.

```
> ...I hate cook books.  
Remind me not to eat your cooking ;-)
```

73 Dave AB5S

Date: Sun, 7 Nov 1999 17:07:43 -0500  
From: polepeeg@aa4rm.ba-watch.org (Marty's Refl. Drop)  
Message-Id: <199911072207.RAA08174@aa4rm.ba-watch.org.>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Best ham T-shirt

I don't write hamfest reports but had to note this.

Seen today @ Aford/Atlanta hamfest.

Picture this on the front.....

DYNAMO HUM

12" x 10" moun-  
tain/sky-scape  
celebrating  
nature

Amateur Radio Club

Life's too short for cheap beer and QRP

Gets my vote for hands-down best ever.

Message-ID: <3825FC10.14679262@ix.netcom.com>  
Date: Sun, 07 Nov 1999 16:24:16 -0600  
From: David Stinson <arc5@ix.netcom.com>  
MIME-Version: 1.0  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: Buying and Selling Tubes  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

mblair@home.net wrote:

> Those series-filament miniature tubes are used in most of the military  
> tactical vehicular radios from the 1950's. A cursory glance through  
> one of my manuals turns up the following tube line-up:  
>  
> 1A3 1AE4 1L4 1R5 1S5 1U4 2E24 3A4 3A5 3B4 3Q4 6AK5

I totally forgot about battery tubes!

The ones you list aren't series-filament TV tubes,  
but battery radio tubes. They are all worth saving, of course!  
And I also stated that compactrons used in our radios were  
worth the effort to save as well.

> How can you tell somebody to throw away good tubes? IMHO, that is  
> completely contrary to the spirit of our hobby....

Because I was writing about practical marketing of tubes-  
not tube hobby ethics. That's a matter of personal convictions.

"Good tubes" within the context of what I wrote  
are defined as tubes which you could sell for a return  
that would cover your expenses in keeping and marketing them.  
I did write at the outset that there might be hobbyist who want  
things like 3AK5 and 4BQ8, and that they might take them for free.  
That is, in effect, "tossing" them.

I must tell you that I have on many occasions attempted to  
GIVE AWAY hordes of these type tubes. I had exactly ONE  
person offer to take them if I paid the shipping!!  
Needless to say, they went to the dump. I don't have space  
or time to mess with these type tubes. I'll dedicate my  
space to those tubes people actually need.

73 Dave AB5S

73 Dave AB5S

-----  
Message-ID: <005501bf2974\$013ec7e0\$dd3cbfd1@MikeBFeher>

From: "Mike Feher" <n4fs@monmouth.com>

To: Old Tube Radios <boatanchors@theporch.com>

Subject: Re: Buying and Selling Tubes

Date: Sun, 7 Nov 1999 18:01:17 -0500

MIME-Version: 1.0

Content-Type: text/plain;  
charset="iso-8859-1"

Content-Transfer-Encoding: 7bit

The tubes Will (W0E0M) was talking about did not have metal pins!!!

Mike B. Feher, N4FS  
89 Arnold, Blvd.  
Howell, NJ, 07731  
732-901-9193

By

> itself, a tube is just a glass bulb with metal pins. Once I put it in  
> a radio, I can actually \*do\* something with it.  
>

-----  
Message-Id: <3.0.32.19991107142811.00703984@pop.mindspring.com>  
Date: Sun, 07 Nov 1999 15:07:31 -0800  
To: Old Tube Radios <boatanchors@theporch.com>  
From: jim lockwood <jmlckwd@mindspring.com>  
Subject: Re: Need DX-100 Audio Advice  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

At 06:11 PM 11/06/1999 -0700, James Hanlon wrote:

>  
>My problem with the DX-100 modulation is that it seems to be  
>heavily distorted. When I drive the mike input with a pure,  
>1000 Hz sine wave, the resulting modulation envelope is  
>considerably rounded and flattened on the positive peaks and  
>perhaps narrowed on the negative peaks.

Jim,

The audio quality you've described for your DX-100 isn't normal. Although DX-100s are seldom confused with broadcast transmitters, they don't necessarily sound bad either.

I went thru the exercise of tracking down audio distortion in my DX-100B earlier this year. I discovered it's possible to make a DX-100 sound "pretty good" if you just ensure the circuitry is bone stock. I also discovered that with some simple changes, it's possible to make the audio sound "very good".

This process of discovery was an interesting odyssey. When I finished it, I wrote up my findings and I've attached a copy to the end of this mail. You may find something that pertains to the audio circuitry in your own transmitter. I'll be glad to answer any questions, assuming I can remember some of the "whys" of what I did.



73,

Jim - k4ccf

----- .oOo. -----

Return-Path: <owner-boatanchors@theporch.com>  
X-Sender: jmlckwd@pop.mindspring.com  
Date: Sun, 28 Feb 1999 17:03:19 -0800  
To: Old Tube Radios <boatanchors@theporch.com>  
From: jim lockwood <jmlckwd@mindspring.com>  
Subject: DX-100 Audio, revisited  
Reply-To: jmlckwd@mindspring.com  
Sender: owner-boatanchors@theporch.com  
X-Listprocessor-Version: 8.2.04 -- ListProc(tm) by CREN

Hi Gang,

Many of you were extremely interested and helpful a few weeks ago when I reported on the audio distortion I was experiencing with my DX-100B. I'm grateful for all the help. The transmitter is now working as well as it's likely to ever work. Because of all the interest, I thought it would be worthwhile to report on what I did to my DX-100B. Maybe what I learned will help someone else in their restoration efforts.

The original problem was that the audio was very, very unpleasant. Thinking that this was simply age related component deterioration, I rebuilt the audio chain.

Even after I rebuilt the audio chain, however, the audio still wasn't very good. By "rebuilt", I mean that I replaced all the carbon resistors with metal film, replaced the paper caps with mylar, and checked tubes. Nothing fancy. The only "improvements" I made at this time were well known ones: Input grid resistor R5 was increased to 1M, coupling caps C11 and C13 were increased by about 4X (I wanted more bass, not excessive, muddy bass), and cathode bypass caps C7, C6, and C8 were increased to 4.7uF.

When I went on the air with the rebuilt audio, I learned it sounded better than it had, and in fact was in the 90th percentile of DX-100s, but it still wasn't very nice. This caused me to haul the boatanchor back to the work bench (one of about a dozen round trips it made during this exercise).

Here then, is what I did that boosted the local rating of my DX-100B from

the 90th percentile to the 99th percentile of audio quality.

First, I removed R14 and R15, the 1K grid resistors tied to the 1625 modulator tubes. This is a well known change. It greatly reduces the waveform distortion when the 1625 grids are driven positive. (They shouldn't ever go positive, but if they do, you don't want any more distortion than absolutely necessary.)

I also removed the .02 uF cap across the secondary of the modulation transformer. This is another relatively well known change. Two observations: The typical "talk back" from the modulation transformer went away completely. Very disconcerting! I have been used to this sound for 37 years! Also, there is now \*significant\* audio energy available well beyond 12 Kc. Talk about wiiiiiiiide! BTW: There are some reports of the modulator going unstable with this cap removed. I haven't experienced it with this transmitter .... yet. I'm not yet totally comfortable operating without the cap; I may install a .005 or .01 before I button the transmitter back up.

Even with almost all of the "accepted" changes, the audio reports weren't entirely positive. I had reports of their being some raspiness on the audio and of some "popping" noises on voice peaks.

The one remaining change, of those that are widely recommended, was to fix the 1625 modulator bias at -35 Volts by way of a zener diode between point "J" on the interstage transformer T3 and ground.

The 35 Volt zener cured the popping noise (I can explain why, if anyone is interested), so this was a step in the right direction. However, once the zener clamped the bias at -35 Volts, I was unable to modulate to 100% without significant distortion showing up. And this made sense, once I thought about it.

Remember the 1625s operate AB1. They aren't really supposed to draw grid current. Well, with the grids clamped at -35 Volts, that limited the amplitude of the audio signal that could be applied to them to 70 V p-p. Any larger signal and the grids conduct and that results in a very distorted waveform. So, keeping the tubes operating AB1, just isn't sufficient to do any better than about 70% modulation.

Too, there was still that pesky raspiness on the audio that I kept hearing about.

What I did to fix the raspiness and the less-than-100%-modulation problem was to add an unbypassed, 100 Ohm cathode resistor to the 1625 circuit (keeping the 35 Volt zener previously added to the grid circuit). This did two things, both useful:

First, it shifted the bias more negative by about 5 Volts. Now, with -40 V on the grids, the 1625s could see an 80 V p-p grid signal and this is sufficient to come very close to 100% modulation.

Second, since the cathode resistor is unbypassed, its presence provides some negative feedback. This feedback lowers the source impedance seen looking back from the primary of modulation transformer T4. This reduction in source impedance seems to be a Real Good Thing in that it helps the transformer more accurately reproduce the applied waveform.

In any event, once I added this resistor, the audio reports got a \*lot\* more favorable.

In summary, I am pleased (and relieved) to report that with the minor tweaks I did when I rebuilt the audio chain initially, plus the generally accepted changes I detailed above, plus the addition of the cathode resistor to the 1625s, that the audio reports are now uniformly complimentary. No one accuses me of running a broadcast transmitter, mind you, and I wasn't after that kind of audio from a DX-100. I wanted audio that was pleasant to listen to and that seems to be what I have achieved.

I hope this overly long narrative helps someone else with their DX-100. I'll be glad to respond privately or on the list to any comments or questions.

73,

Jim - K4CCF

(formerly KM6NK, WA4K00, WN4K00)

Looking for original QSL cards from K4CCF

<http://www.mindspring.com/~johnmb/radiorm1.htm>

-----  
End of BOATANCHORS Digest 2723

\*\*\*\*\*